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ONTARIO WATER
RESOURCES COMMISSION

ANNUAL REPORT

1961

TOWN OF POINT EDWARD

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Point Edward : sewage
treatment plant.

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POINT EDWARD SEWAGE TREATMENT PLANT

PROJECT NO. 59-S-36

OPERATED FOR

THE TOWN OF POINT EDWARD

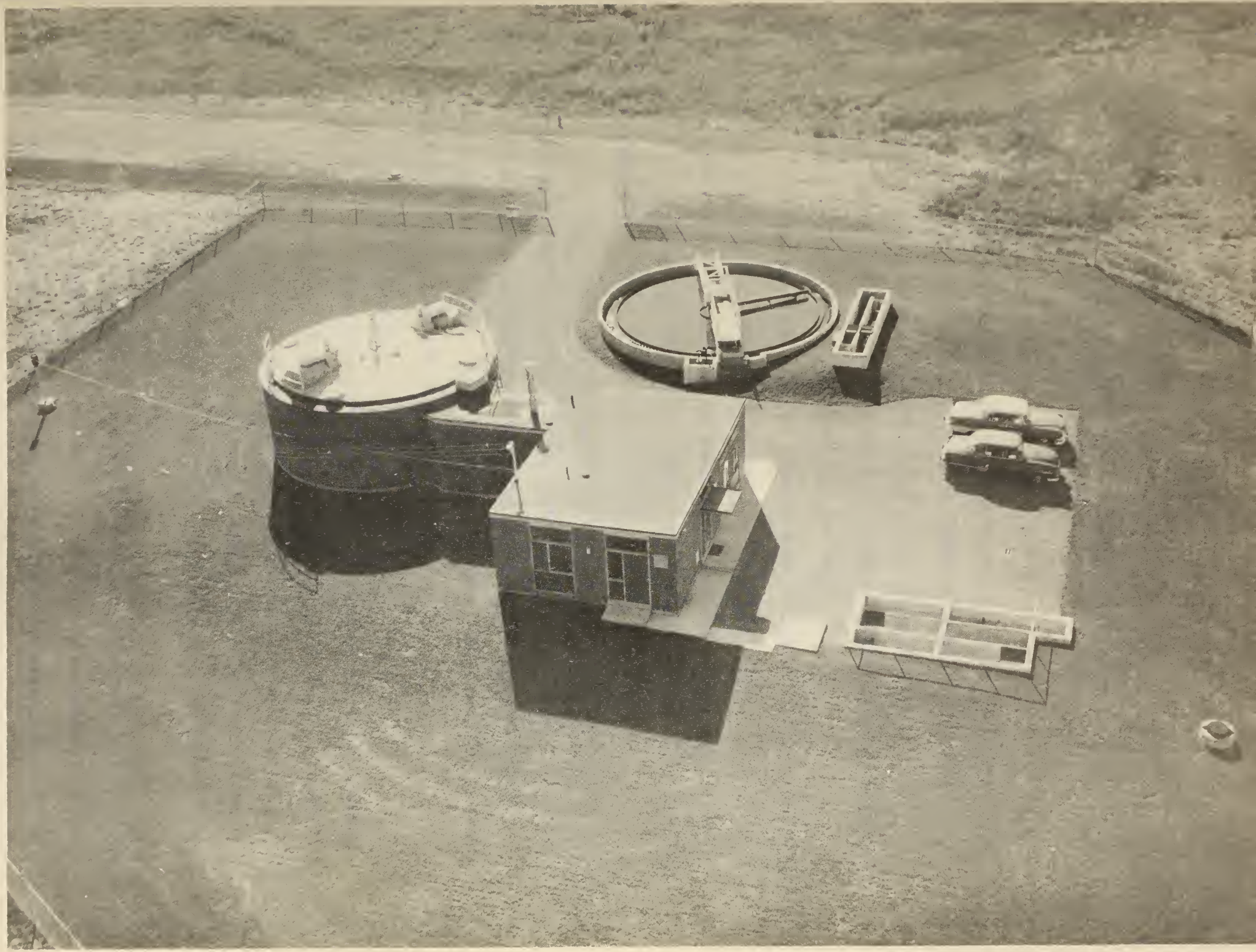
BY

THE ONTARIO WATER RESOURCES COMMISSION

Mr. A. M. Snider	-	Chairman
Dr. A. E. Berry	-	General Manager
Mr. D. S. Caverly	-	Assistant General Manager and Director of Plant Operations.
Mr. B. C. Palmer	-	Supervisor of Sewage Works, Division of Plant Operations.
Mr. D. A. McTavish	-	Project Engineer, Division of Plant Operations.

Prepared by the

Division of Plant Operations.



POINT EDWARD SEWAGE TREATMENT PLANT

GENERAL

The primary sewage treatment plant in Point Edward was completed and put into operation in June of 1961. Treatment consists of screening, sedimentation and chlorination of the sewage and digestion of the settled sludge. The plant is designed to treat a flow of 570,000 gallons per day.

Two package pumping stations are located in the distribution system to deliver sewage from low areas to the plant. Two pumps are provided at the plant to pump the incoming sewage to the grit removal chamber and from this point on the sewage flows by gravity.

DESIGN DATA

The plant was designed by Dunlop, Wardell, Matsui & Aitken, Consulting Engineers, Islington, Ontario with the construction of the plant and ancillary works being carried out by the Eastern Construction Company, Limited, Walkerville. Keystone Contractors Limited constructed the sanitary sewers.

1) Inlet Works

Sewage enters the plant through a 16 inch diameter sewer which passes the flow into a wet well located below ground immediately in front of the main control building. Two raw sewage pumps, each having a total ultimate capacity of 1080 GPM, lift the sewage to the grit removal channels.

The sewage pumped to the grit channels passes through bar screens located at the head of the channels. Two channels are provided and operate in parallel.

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Proportional weirs located at the effluent end of each of the channels maintain the flow at one foot per second and thus allow only sand and grit to settle out.

2) Primary Clarifier

The primary clarifier receives sewage from the grit channels. Sand and grit are removed from the sewage before it reaches the clarifier. Sewage is retained in the 35 foot diameter clarifier for 2½ hours at design flow. Much of the solid material in the sewage settles during this period and is removed as sludge. The sludge is pumped from the bottom of the clarifier to the digester located adjacent to the control building.

3) Chlorine Contact Chamber

The settled sewage passes through a chlorine contact chamber before flowing to the St. Clair River. Chlorine is injected into the sewage at the head of the contact chamber.

4) Digester

Sludge from the primary clarifier is stored in a 30 foot diameter digester and maintained at a temperature of 90 degrees Fahrenheit for approximately 2 months.

Digested sludge is removed in liquid form and hauled by tank truck to be spread on farmlands. This material is a good soil conditioner and has some fertilizing value. Digestion of sludge makes it a more stable material and as a result objectionable odours are minimized.

The gas, mostly methane, resulting from digestion is collected and burnt in a waste gas burner located at the plant.

5) Pumping Stations

Two pumping stations are located in the collection system. One on Helena Street at Louisa and the other on Michigan Avenue near Louisa. The Helena Street station is the larger and contains two 750 GPM pumps. The Michigan Avenue station has two pumps rated at 500 GPM each.

OPERATION

The sewage treatment plant and pumping stations are operated by Mr. Gordon Barwise. Power failures and high sewage levels in the wet well at the plant are telemetered to the operators' house. The plumbing inspector for the town also uses the office at the plant. He periodically assists Mr. Barwise in the operation of the plant and acts as a substitute operator when the operator is on vacation or absent from the plant for a period of time.

The plant has been operating since June of 1961 with only a few minor operating difficulties. The flow meter at the plant was not calibrated as it was decided to change the scale over which it operates. This change was completed by December and the unit put back in service. The flow was estimated during the period the meter was out of service to be 80,000 gallons per day which agrees with flows now indicated by the meter.

Sewer cleaning equipment was purchased late in the year and a recording system for sewers initiated. An annual inspection

of the sewers under the direction of the operator is planned for with the first inspection being in the spring of 1962. The assistance of town employees will be required if cleaning is necessary for any of the sewers.

Sludge has been pumped to the digester since June and it is anticipated that the haulage of sludge from the digester will be necessary early in spring of 1962. Gas production was sufficient to necessitate the operation of the waste gas burner late in the fall.

OPERATING COSTS

The plant operated for approximately six months during 1961 and, as a result, the cost of operation during 1961 was only about one half the estimated cost for 1962. The table below indicates the operating expenses incurred during 1961.

ITEM	COST
Payroll	$ 2,698.32
Fuel	401.03
Power	467.66
Chemical	892.37
General Supplies	372.29
Equipment	366.58
Sundry	331.81
TOTAL:	$ 5,530.06

A breakdown of the estimated operating expenses for 1962 is included on the following page.

ITEM	ESTIMATED COST	% OF TOTAL
Payroll	4,670	36
Fuel	900	7
Power	2,000	15
Chemicals	500	4
General Supplies	400	3
Equipment	200	1½
Maintenance & Repair	600	4½
Sludge Haulage	1,000	9
Sundry	600	4½
Insurance & Taxes	800	6
Contingency	1,330	9½
TOTAL:	13,000	100

During the year, spare parts for the package pumping stations ($194.38) and pumps at the plant ($64.48) were purchased with money obtained from the reserve account. Other materials including a chlorine hand truck and telemetering equipment for the alarm system were also paid for from the reserve account. It was felt that the above expenses would be incurred very seldom during the life of the plant and that they increased the operating expenses during one year only. As a result, they were paid for from the reserve account. The total cost of these items was $429.29.

OPENING CEREMONIES

The official opening ceremonies for the Point Edward S.T.P. were held on Wednesday, October 18, 1961. The Honourable Brian Cathcart, Minister of Travel and Publicity was the principal

speaker with Dr. Anderson, Lampton County Health Unit, as guest speaker.

An open house was held at the plant on Sunday, October 22 with about 100 local residents turning out to tour the plant.